

EAST - [john.wsp:1]

FileViewEditToolsWindowHelp

Active

L1: (26905) dimethylaminopropyl

L2: (798329) catalyst

L3: (1974) 11 same 12

L4: (115600) hydroxypropyls

L5: (78) 13 same 14

L6: (68) 14 near3 11

L8: (25943) "521".clas.

L9: (24) 17 and 18

L7: (621) tertiary adj alkanolamine

L10: (26905) dimethylaminopropyl

L11: (707) 110 and 18

L12: (54715) "502".clas.

L13: (175) 110 and 112

L14: (880) 521/128

L15: (719) 521/129

L16: (1355) 114 or 115

L17: (226) 111 and 116

L18: (1410) 14 same 11

L19: (15) 117 and 118

L20: (35269) octadecyl

L21: (23560) hexadecyl

L22: (97827) dodecyl

L23: (3685) hexadecanol

L24: (7002) dodecanol

L25: (5635) octadecanol

L26: (1417) neodecanoic

L27: (125554) 120 or 121 or 122 or 123 or 124 or

L28: (212) 127 and 116

L29: (19) 110 and 128

L30: (463) 110 same 127

L32: (6) 130 and 112

L33: (0) ("1000031").PN.

L31: (4) 130 and 116

L34: (4) epodil same polycat

L35: (2) cardura same polycat

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EAST

PGPUB-DOCUMENT-NUMBER: 20040180979

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040180979 A1

TITLE: Tertiary alkanolamines containing surface active alkyl groups

PUBLICATION-DATE: September 16, 2004

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY

RULE-47

Raymond, William R. New Tripoli PA US

Burdeniuc, Juan Jesus Macungie PA US

Yacoub, Khalil Allentown PA US

APPL-NO: 10/ 385576

DATE FILED: March 10, 2003

INT-CL: [07], C08G018/00 , C07C215/02

US-CL-PUBLISHED: 521/163, 564/503

US-CL-CURRENT: 521/163, 564/503

ABSTRACT:

The present invention relates to novel tertiary alkanolamines useful as catalysts for preparing polyurethane foams and as additives to reduce the dynamic surface tension of aqueous solutions. The tertiary alkanolamines may be represented by formula (I): 1 wherein A, R.sup.1-R.sup.6, and n are defined herein.

BRIEF SUMMARY:

FIELD OF THE INVENTION

[0001] The present invention relates to the use of novel tertiary alkanolamines

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	U	Document ID	Issue Date	Pages	Title	Current OR	Current XRef	Retrieval C	Inventor	S	C	P	2	3
1	<input type="checkbox"/>	US 20040181077 A1	20040916	13	Tertiary alkanolamines containing surface active	548/953	564/511		Raymond, William R. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	US 20040180979 A1	20040916	13	Tertiary alkanolamines containing surface active	521/163	564/503		Raymond, William R. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HelpDetailsHTML

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NUM

EAST - [john.wsp:1]

FileViewEditToolsWindowHelp

Active

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L3: (1974) 11 same 12

L4: (115600) hydroxypropyls

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L6: (68) 14 near3 11

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L9: (24) 17 and 18

L7: (621) tertiary adj alkanolamine

L10: (26905) dimethylaminopropyl

L11: (707) 110 and 18

L12: (54715) "502".clas.

L13: (175) 110 and 112

L14: (880) 521/128

L15: (718) 521/129

L16: (1355) 114 or 115

L17: (226) 111 and 116

L18: (1410) 14 same 11

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L20: (35269) octadecyl

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L27: (125554) 120 or 121 or 122 or 123 or 124 or

L28: (212) 127 and 116

L29: (19) 110 and 128

L30: (463) 110 same 127

L32: (6) 130 and 112

L33: (0) ("1000031").PN.

L31: (4) 130 and 116

EAST

formaldehyde, 48 g of conc. HCl, and a solution of 35 ml of NaOH in 350 ml of H.sub.2 O. After extraction of the amine, distillation of the extracts yields 55.6 g (61.8%) of pure amine with a boiling point of 134.degree. C./20 millibar. The IR spectrum shows no NH bands above 3000 cm.sup.-1.

(69) EXAMPLE 27: Cyclohexyl-.gamma.-dimethylaminopropyl ether ##STR21##

(70) The following batch is reacted and worked up as in Example 24: 180 g of cyclohexyl-.gamma.-aminopropyl ether, 250 g of formic acid, 190 ml of 38% of formaldehyde, 113 g of conc. HCl, and a solution of 66 g of NaOH in 200 ml of H.sub.2 O. Distillation yields 121.5 g (60.2%) of analytically pure amine (analysis by gas chromatography) with a melting point of 115.degree./18 millibar.

(71) EXAMPLE 28: Dodecyl-.gamma.-dimethylaminopropyl ether

(72) CH.sub.3 (CH.sub.2) .sub.11 OCH.sub.2 CH.sub.2 CH.sub.2 N(CH.sub.3) .sub.2

(73) The following batch is reacted and worked up as in Example 24: 191 g of dodecyl-.gamma.-aminopropyl ether, 180 g of formic acid, 38% formaldehyde, 81 g of conc. HCl, and a solution of 98 g of NaOH in 500 ml of H.sub.2 O. The amine is extracted with a mixture of butanol/hexane. Distillation yields 99.6 g (48.4%) of analytically pure amine (analysis by gas chromatography) with a boiling point of 130.degree. C./0.06 millibar.

(74) EXAMPLE 29: Undecyl-(2)-.gamma.-dimethylaminopropyl ether ##STR22##

(75) The following batch is reacted and worked up as in Example 24: 70.3 g of undecyl-.gamma.-aminopropyl ether, 70 g of formic acid, 53 ml of 38% formaldehyde, 32 g of conc. HCl, and a solution of 23 g of NaOH in 350 ml of H.sub.2 O. The amine is extracted with three 100 ml portions of butanol. Distillation yields 37.8 g (47.9%) of amine with a boiling point of 110.degree. C./0.06 millibar.

(76) EXAMPLE 30: 1,4-Cyclohexyl-di-(.gamma.-dimethylaminopropyl) ether ##STR23##

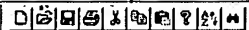
(77) The following batch is reacted and worked up as in Example 24: 66.1 g of

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	U	Document ID	Issue Date	Pages	Title	Current OR	Current XRef	Retrieval C	Inventor	S	C	P	W	3
1	<input type="checkbox"/>	US 20010006986 A1	20010705	12	Rigid polyurethane foams	521/129	252/182.28; 521/128;		Sieker, Thomas Heinrich et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	US 6747069 B1	20040608	13	Tertiary alkanolamine polyurethane catalysts	521/128	521/118; 521/129;		Burdeniuc; Juan Jesus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	US 6207725 B1	20010327	11	Rigid polyurethane foams	521/172	252/182.24; 521/121;		Sieker; Thomas Heinrich et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	US 4352913 A	19821005	11	Dimethylamino derivatives and their use	525/504	528/111; 528/121;		Zondler; Helmut et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NUM

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- PG PUB**
- ☐ Drafts
 - ☐ Pending
 - ☒ Active
 - ☒ L1: (328890) polyurethane
 - ☒ L2: (430112) foam
 - ☒ L3: (180208) polyisocyanate or isocyanate
 - ☒ L4: (142010) polyol
 - ☒ L5: (3447951) water
 - ☒ L6: (33782) blowing adj agent
 - ☒ L7: (1153) cell adj stabilizer
 - ☒ L8: (798329) catalyst
 - ☒ L9: (303151) stabilizer
 - ☒ L10: (1606) acid adj (blocked or blocker or block)
 - ☒ L11: (146) 11 and 12 and 13 and 14 and 15 and 16
 - ☒ L12: (40) 111 and 17
 - ☒ L13: (31) 111
 - ☐ Failed
 - ☒ acid adj (blocked or blocker or blocking)
 - ☐ Saved
 - ☐ Favorites
 - ☐ Tagged (0)
 - ☐ UDC

PGPUB-DOCUMENT-NUMBER: 20010005736
PGPUB-FILING-TYPE: new-utility
DOCUMENT-IDENTIFIER: US 20010005736 A1
TITLE: Compatibilization of internal mold release agents
PUBLICATION-DATE: June 28, 2001
INVENTOR-INFORMATION:
NAME CITY STATE COUNTRY RULE-47
Rothacker, Andreas H. Hoeilaart BE
APPL-NO: 09/ 767085
DATE FILED: January 22, 2001
RELATED-US-APPL-DATA:
child 09767085 A1 20010122
parent continuation-of PCT/US99/17396 19990729 US UNKNOWN

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	U	Document ID	Issue Date	Pages	Title	Current OR	Current XRef	Retrieval C	Inventor	S	C	P	
22	<input type="checkbox"/>	US 20030148061 A1	20030807	5	Sodium silicate coating process and products	428/95	427/412; 427/419.7;		Doesburg, Van I. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	<input type="checkbox"/>	US 20030087974 A1	20030508	9	Rigid hybrid polyurethane foams	521/99			Lekovic, Huzeir et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	<input type="checkbox"/>	US 20030068490 A1	20030410	18	Phthalate polyester polyol-based compositions	428/343			Raplan, Warren A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	<input type="checkbox"/>	US 20030032553 A1	20030213	7	Acid-blocked amine catalysts for the production of	502/162	528/48		Wendel, Stephan Herman et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	<input type="checkbox"/>	US 20030018096 A1	20030123	9	Rigid polyurethane foams	521/155			Lekovic, Huzeir et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	<input type="checkbox"/>	US 20020121328 A1	20020905	35	Method of producing a bio-based carpet material	156/72	156/309.6; 156/322		Kurth, Thomas M. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	<input type="checkbox"/>	US 20020119321 A1	20020829	36	Vegetable oil-based coating and method for application	428/423.1	427/384; 427/426		Kurth, Thomas M. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	<input type="checkbox"/>	US 20020090488 A1	20020711	35	Bio-based carpet material	428/95	428/85; 428/96		Kurth, Thomas M. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	<input type="checkbox"/>	US 20020058774 A1	20020516	27	Transesterified polyol having selectable and	527/301	536/119; 536/53		Kurth, Thomas M. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	<input type="checkbox"/>	US 20010005736 A1	20010628	12	Compatibilization of internal mold release agents	524/728	252/182.2; 524/726;		Rothacker, Andreas H.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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